773 Finally, he occupied himself with agriculture. In particular, he gave men, through the intermediary of the blacksmiths, the eight cereal grains that had been created simultaneously with man but had remained hidden in the sky (1). The eight grains became the basis

[171]

1. A myth parallel to this can be found among the Dogon (see M. Griaule, Dieu d'eau). It makes the Bambara blacksmith into a civilizing hero, a metamorphosis of Faro, descended from the sky in an ark, kuru, and holding in his hand a mass containing the eight cereal grains. See M. Griaule, L'Arche du monde chez les populations nigériennes; S. de Ganay, Notes sur la théodicée bambara, pp. 194-196.

for subsistence and are fundamental to the human being who carried the symbol of them on his collar-bone (2).

[171 243]

2. The eight grains are as follows: saŋõ, small millet (Pennicillaria spicata); keninge, large millet (Sorghum gambicum); kende, red millet (Sorghum magaritiferum); fini, fonio (Digitaria exilis); syõ, beans (Vigna maniculata); tikaninkuru, peas; malo, rice. The names of the seeds vary, but the same symbols occur among the Dogon. In the Bozo myth, the collar-bone is the receptacle for eight fish, represented by symbols on the forward part of canoes. See G. Dieterlen. Les Correspondances cosmo-biologiques chez les Soudanais /Cosmic-Biological Correspondences among the Sudanese/.

Everything on earth is represented in the water: living beings by their doubles or witnesses, dya; plants and minerals by an exact replica, which enabled Faro to exert constant control over the existence and actions of the beings placed in his power.

He put spirits as his representatives everywhere in charge of watching over the universal order.

326 778 243 The lower compartment contains millet from a field called kongobwona foro, reserved for the needs of the cult of the forge. This land is placed under the guardianship of the patriarch belonging to the Gwonna family, and its upkeep is assured by the community. The seeds are given by each blacksmith to the old man who sows them himself. The work of cultivation and threshing is done communally. The millet is stored in the old man's granary and each blacksmith receives a share. This share is not eaten, but is put aside. From time to time the artisan takes a few seeds which he places as an offering on his altar, and which remain for a time in the compartment reserved for them; then they are considered to have been eaten by the axe and are removed and replaced by others. Part of the millet is kept as seed for the following year.

326 778 789 Each compartment is open and the blacksmith may insert his fingers; if his earnings are insufficient, he rubs his body and tongue with the hand which he has just dipped into the pocket containing money; the price, set by the spoken word, will not be questioned by the client. If he goes to work in his field, he places his hand into the millet each morning to draw upon the strength it contains and to improve the results of his agricultural work. If he burns himself while working at the forge, he dips his fingers into the third compartment and cools himself in Faro's water. It is this same water which a young artisan must drink at the beginning of his apprenticeship.

326 778 776 The triangular iron, farabye, which constitutes the axe proper is placed under the power of three spirits belonging to the group of air spirits: A gayru who revealed iron to men; Tengu who taught them Faro's supremacy; and Gullé. The first two are the masters of the bellows and direct the work as a whole; the third does their bidding and teaches men the technology of ironwork (1). When the owner

1. The spirit would have refused to teach the blacksmiths the working of copper and gold, as these two metals belonged to Faro who reserved for himself the right to use them. Since iron was black he had ... abandoned its use to the spirits of the air.

of the altar dies, the /121/ axe is removed and placed in the village sanctuary where the ancestral tools are kept. But the remaining objects are inherited by the son. [428]

241 may be set too early, and no amount of advice to be patient will retard it. However, for the millets, fonio, and rice, the visible characters of ripeness are known and respected (opening of the husk in the case of millet, color and bowing of the spike in the case of fonio and rice).

242 824 When a field is exhausted, it is allowed to lie fallow, and another terrain is cleared of brush, sometimes several kilometers from the village. A field is recognized as being exhausted when a variety of plant known as sege (Striga senegalensis Benth) appears spontaneously; when the soil is reconstituted and regains its richness, tiekala (Cymbopogon giganteus Benth) and wägha (Andropogon Gayanus Kunth) appear, which indicates that the field may again be cultivated. Thus, the fields are rotated around the village that cultivates them, 342 following a cycle which may last 20 years. Temporary dwellings are set up near the fields under cultivation, and the farmer lives there during the work with each of his wives in turn.

[29] B. Food Crops

243 The Bambara cultivate food plants and textile plants. Millet is the basic crop in the savanna. The pénicillaires, small millet (Pennisetum typhoïdeum R.), are cultivated very far north. Their types are characterized by the length of their vegetative cycles, which vary from 65 to 140 days. In general, they are sown in a rather light soil at the beginning of the rainy season. The grain is put in the ground, without preliminary working of the soil, in holes one pace apart and a few centimeters deep. A pinch of seed is put in each hole, and one to three subsequent workings are given the soil; the first, 15 days after reaping, the others in July and August. The yield varies from 350 to 1,000 kilograms per hectare.

The sorghums (Sorghum vulgare) include a considerable number of varieties with vegetative cycles varying from 120 to 150 days. M. Vichon has collected 11 samples of sugar sorghums, 132 of late mid-season, 87 early, 138 of transplants. M. Creak divides the sorghums into three types: with full, compact, conical spikes; with elongated spikes and more detached spikelets; with very elongated spikes and with spikelets even more detached from the axis. A third

243 classification is based on the distinction between the sorghums of ordinary soils and those of inundated soils. The latter are sown in August in nursery beds in fresh non-inundated ground and are transplanted at the end of the rainy season in land exposed by the receding waters. The yields vary from 400 to 1,200 kilograms per hectare.

[252 273] Millet is consumed in the form of flour or is used to make a fermented beverage, dolo, which is something like weak beer.

Wheat is cultivated in the wadies where the water is shallow from November to February. Cultivation is carried out with or without irrigation in seed holes 25 centimeters apart and 4 centimeters deep, where the farmer deposits a pinch of seed (70 kilograms of seeds are necessary per hectare). The harvest is at the end of March at the latest. The average yields are from 1,000 to 1,500 kilograms. The wheats are generally tender and give excellent flours for bread, but this culture is still in the experimental stage.

Rice is cultivated on 80,000 hectares, of which almost half are in the central Delta (Mopti, Macina, Djenné) which constitutes the true rice granary of the territory. Outside of the Delta, the productive regions are: the upper basin of the Niger (Bamako), the lake and post-lake region (from Lake Débo to Ansongo), the region near Guinea (south of Sikasso and Bougouni), and finally 10,000 hectares of irrigated rice of the Niger Office.

Two kinds of rice are cultivated: one, an African rice (Oryza glaberrima) in the Delta, is a floating rice capable of enduring considerable submersion. The other, of Asiatic origin (Oryza saliva) [sic], is cultivated in the upper valley of the Niger and in the valleys of the small water courses. Lastly, a mountain rice which grows on dry ground must be mentioned.

What characterizes native rice culture is the absence of [30] 243 hydraulic control. It is a rice culture of submersion, thus very 312 insecure. Since 1944 attempts have been made to end these processes of "wild" submersion. In the upper valley of the Niger where the plains are insufficiently and tardily submerged, rice is sown at the beginning of the rainy season, and when it attains a growth of 20 to 25 centimeters, the water is sent gradually into the plain. When the rice is mature, the water is drawn off into the river through overflow outlets. In the Delta, where the rise of the Niger is utilized directly, regulating works prevent the flood from

[sic] [should be sativa - Analyst]

243 manifesting itself too violently and afterwards hold back the receding
312 waters. In the Sahel, the arrangements affect the plains bordering the Niger, where earthen dikes protect the rice from the floods and also control the tributary lakes where they join the river, holding the receding waters in the lakes, thus permitting transplantation of the rice and preventing the subsiding flood from drowning the plants before harvest. From 1944 to 1949, 101,550 hectares were regulated in this manner in the upper valley, the Delta, and the valley of the Sahel.
243 There is a plan to regulate 331,000 new hectares by 1956. In addition, experiments in mechanical tillage have begun. Up until now two methods of cultivation have been applied.

a. Without burning: the hoed land is prepared in furrows 40 to 50 centimeters apart; the seeding is done in seed holes 25 centimeters apart along the furrows. (1)

1. L'agronomie tropicale [Tropical Agronomy], July-August, 1950. [Ed., Revue d'agronomie tropicale, 1951.]

b. With burning: the wild grasses are pulled up in March and April and gathered in beds 1 meter wide and 3 to 6 meters long. They are lightly covered with earth and then set on fire. At the end of June the mounds are turned by hoe, and the seeds planted in holes 30 centimeters apart and 4 centimeters deep. Fifteen grains are put in each hole, or 45 to 50 kilograms per hectare. The yields vary between 800 and 1,200 kilograms of paddy per hectare.

To these basic crops are added the following early carry-over crops:

The millets. Fonio (Digitaria exilis) is cultivated in the region of Senegambia, and iburu (D. Iburna) in the central sector of the Sudan.

Maize and banana trees south of Bamako. Maize is the most widespread crop after millet. Nevertheless, some maize is imported
[351] from Dahomey. Banana trees are planted around the huts and form a belt around the villages. They are also planted in the small fields which border the water courses. Large bananas are harvested which are picked green and cooked.

245 Mango trees, recently imported (about fifty years ago), give
177 an excellent yield and are destined to be developed more and more.